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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,166	03/23/2004	Jin-Chung Bai	BAIJ3002/EM	2188
23364	7590	10/01/2004	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			MAGEE, THOMAS J	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/806,166

Applicant(s)

BAI ET AL.

Examiner

Thomas J. Magee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claim 6 is objected to on the basis of minor informalities. In Claim 6, the phrase, "*the top thereof is greater than the first die,*" appears to have a typographical error and Examiner assumes Applicant meant to recite, "the [size of the] top thereof is greater than the [the size of] the first die." Additionally, Applicant recites, "*wherein the second die is greater than the first die,*" and Examiner assumes Applicant meant to recite, "wherein [the size of] the second die is greater than [the size of] the first die. In both cases, correction is required.

2. Claim 10 is objected to on the basis of a minor informality. In Claim 10, the phrase, "*wherein a size of the to of the first adhesive layer,*" appears to have a simple spelling error and Examiner assumes Applicant meant to recite, "*....top of the first adhesive layer.*" Correction is required.

### ***Claim Rejections – 35 U.S.C. 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimura (US

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6,744,141 B2).

4. Regarding Claims 1 and 6, Kimura discloses a stacked semiconductor device comprising:

a substrate (1) (Figure 3C) having a conductor pattern and a die bonding portion, wherein the conductor pattern has pads (Col. 2, lines 57 – 58, 62 – 65),

a first die (4) bonded on the die bonding portion (Col. 2, lines 57 – 58) of the substrate and having pads, thereon, wherein the pads of the first die (4) are electrically connected to the pads of the conductor pattern by wires (7) (Col. 2, lines 62 – 65).

a first adhesive layer (3a) provided on the substrate (1) to cover the first die (4) and the wires (7), wherein the first adhesive layer has a top and the size of the top of the adhesive layer is greater than that of the first die (Figure 3C), and

a second die (3) bonded on the top of the first adhesive layer (3a) and having pads thereon, wherein the pads of the second die are electrically connected to the pads of the conductor pattern by wires (6) (Col. 2, lines 62 – 65), wherein the size of the second die is greater than that of the first die (Figure 3C) (Col. 2, lines 54 – 57).

5. Regarding Claims 2 and 7, Kimura discloses a second adhesive layer (2a) provided on the substrate (1) to cover the second die (3) and wires (6).

6. Regarding Claim 3, Kimura discloses (See Figure 3C) that the size of the top of the first adhesive layer (3a) is greater than a size of a top of the first die (4).

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7. Regarding Claims 4 and 10, Kimura discloses (See Figure 3C) that the size of the top of the first adhesive layer (3a) is substantially equal to the size of the bottom of a second die (3).

8. Regarding Claim 5, Kimura discloses (See Figure 3C) that the size of the first die (4) is smaller than a size of the second die (3) (Col. 2, lines 54 – 57).

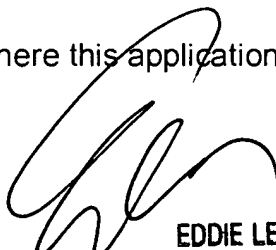
9. Regarding Claim 8, as discussed earlier, Kimura discloses that the second die (3) is electrically connected to the pads of the conductor pattern by wires (6) and the second adhesive layer (2a) covers the second die (3) and wires (6).

10. Regarding Claim 9, as discussed earlier, Kimura discloses that the first die (4) is electrically connected to the pads of the conductor pattern by wires (7) and the first adhesive layer (3a) covers both the first die (4) and wires (7).

### **Conclusions**

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to **Thomas Magee**, whose telephone number is **(571) 272 1658**. The Examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM (EST). If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, **Eddie Lee**, can be reached on **(571) 272-1732**. The fax number for the organization where this application or proceeding is assigned is **(703) 872-9306**.

Thomas Magee

  
**EDDIE LEE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**

September 24, 2004